

CLAIMS

1. A node for an optical communication network having at least one switching unit (2), a plurality of optical interfaces (1) for connecting to a transmission line (3), which comprise a demultiplexer (4) for disassembling a multiplex signal arriving from a WDM transmission line into a plurality of input channels (8), each of which is supplied to an input port of the switching unit (2), and a multiplexer (5) for assembling a plurality of output channels (11), each originating from an output port of the switching unit (2), into an outgoing multiplex signal, and at least one receiver (10) for extracting an information signal from the communication network, characterized in that an input switching means (7) is located between each interface (1) and the switching unit (2) on the path of the input channels (8) and is adapted to supply an input channel (8) to the switching unit (2) as well as to the receiver (10).
2. The node of claim 1, characterized in that the input branching means (7) comprises, corresponding to each output port of the demultiplexer (4), a switch (9) for selectively connecting this output port to one of the input ports of the switching unit (2) or to the receiver (10).
3. The node of claim 2, characterized in that each receiver (10) has one output port of the demultiplexer (4) associated to it, to which it is connectable by the input branching means (7), and that the receivers (10) are provided in a number corresponding to the number of the input channels.

4. A node for an optical communication network having at least one switching unit (2), a plurality of optical interfaces (1) for connecting to a transmission line (3), which comprise a demultiplexer (4) for disassembling a multiplex signal arriving from a WDM transmission line into a plurality of input channels (8), each of which is supplied to an input port of the switching unit (2), and a multiplexer (5) for assembling a plurality of output channels (11), each originating from an output port of the switching unit (2), into an outgoing multiplex signal, and at least one transmitter (13) for supplying an information signal to the communication network, characterized in that an output switching means (7) is located between each interface (1) and the switching unit (2) on the path of the output channels (11) and is adapted to supply an output channel (11) to the interface(1) from the switching unit (2) as well as from the transmitter (13).

5. The node of claim 4, characterized in that the output branching means (7) comprises, corresponding to each input port of the multiplexer (5), a switch (9) for selectively connecting this input port to one of the output ports of the switching unit (2) or to the transmitter (13).

6. The node of claim 5, characterized in that the transmitters (13) are provided in a number corresponding to the number of the output channels (11), and that each transmitter (13) has one input port of the multiplexer (5) associated to it, to which it is connectable by the output branching means (7).

7. The node of claim 5, characterized in that the transmitter (13) is connectable to a plurality of output channels (11) and is adapted to supply an information signal having a selectable wavelength to an output channel (11).

8. The node of claim 1, 2 or 3 and claim 4, 5, 6 or 7, characterized by transponders (6), each of which comprises one of the transmitters (13) and one of the receivers (10), wherein the transmitter (13) and the receiver (10) of a same transponder (6) is connected to the branching means (7) of a same interface (1).

9. The node of claim 8, characterized in that the input and output branching means (7) are further adapted to supply to the switching unit (2) an input channel (8) from the interface (1) as well as to supply it from one of the transponders (6), and to supply an output channel (11) from the switching unit (2) to an output channel (11) of the interface (1) and to one of the transponders (6).

10. The node of one of the preceding claims, characterized in that each receiver (10) is an optical-electrical converter and each transmitter (13) is an electrical-optical converter.

11. The node of claim 10, characterized in that at least one transponder (6) comprises a signal regenerator circuit (16).